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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,561	06/15/2006	Ilias Manettas	2003P00533WOUS	4717

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EXAMINER

COX, ALEXIS K

ART UNIT	PAPER NUMBER
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3744

MAIL DATE	DELIVERY MODE
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12/22/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/551,561	Applicant(s) MANETTAS ET AL.	
	Examiner ALEXIS K. COX	Art Unit 3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 10-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/03/2005</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

1. Claim 19 is objected to because of the following informalities: the term "change in speed of temperature" on lines 2-3 of claim 19 should be changed to "speed of change of the temperature" for increased clarity of the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 10-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Tilmanis (US Patent No. 3,839,878).

4. Regarding claims 10, 17, 21, and 22, Tilmanis discloses a refrigeration device, comprising a thermally insulating housing (10, see column 3 line 53, see also figure 1) enclosing an inner chamber (14, see column 3 lines 54-55) and an evaporator arranged in said housing (18, see column 3 lines 59-60) separated from the inner chamber; the evaporator including a surface where an ice layer forms during operation (see column 5 lines 10-14); a pair of temperature sensors (36, 38, see column 4 line 10) placed in the vicinity of the evaporator such that for a given thickness of the ice layer only one of the temperature sensors is embedded in the ice layer (see column 4 lines 17-19); a heating

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device for heating the evaporator (see column 3 lines 63-65); and a monitoring circuit connected to the pair of temperature sensors (see column 4 lines 30-41) which determines the difference between the temperature values detected by the pair of temperature sensors and activates the heating device when the temperature difference exceeds a predetermined value (see column 4 lines 42-47).

5. Regarding claim 11, the refrigeration device of Tilmanis further has a first sensor arranged directly on the surface of the evaporator (36, see column 4 lines 17-18) and the second temperature sensor is arranged at a distance from the surface (38, see column 4 lines 18-19).

6. Regarding claim 12, the refrigeration device of Tilmanis discloses a channel communicating with the inner chamber with the evaporator arranged in the channel, as without such a channel the refrigeration device would not keep the inner chamber cold.

7. Regarding claim 14, figure 1 discloses the refrigeration device of Tilmanis to have the evaporator arranged in the housing separated from the inner chamber by an insulating partition, and there must be at least one channel through the partition communicating with the inner chamber and the evaporator in order to keep the inner chamber cold.

8. Regarding claim 20, the evaporator is heated when it is decided that a defrosting procedure is necessary (26, see column 3 lines 63-65 and column 4 lines 1-3).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claims 13, 15, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tilmanis (US Patent No. 3,839,878).

13. Regarding claims 13 and 15, it is noted that Tilmanis does not explicitly disclose the second temperature sensor to be arranged on an output of the channel terminating in the inner chamber. However, it would have been an obvious mechanical expedient to one of ordinary skill in the art at the time of the invention to rearrange the existing parts

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to place the second temperature sensor on an output of the channel terminating in the inner chamber in order to ensure that the temperature sensed by the second temperature sensor is not rendered inaccurate by proximity to frozen items in the freezer.

14. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tilmanis (US Patent No. 3,839,878) in view of Davis et al (US Patent Application Publication No. 2001/0054292).

15. Regarding claims 18 and 19, it is noted that the system of Tilmanis is not explicitly disclosed to perform a preset delay after the evaporator is started up before beginning the defrost evaluation procedure, or to perform the defrost evaluation procedure if the speed of change of temperature on at least one of or both sensors has fallen below a predetermined limit value. However, the system of Davis et al comprises a microprocessor controller which receives and interprets sensor signals (see paragraph [0016]), and it would have been obvious to one of ordinary skill in the art at the time of the invention to implement such programming in the controller in order to prevent excessive defrosting, which is inefficient, and also to prevent inadequate defrosting, which is also inefficient.

Double Patenting

16. Claims 10 of this application conflict with claims 11 of Application No. 10/551561. 37 CFR 1.78(b) provides that when two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during

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pendency in more than one application. Applicant is required to either cancel the conflicting claims from all but one application or maintain a clear line of demarcation between the applications. See MPEP § 822.

17. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

18. Claims 10-13 are provisionally rejected on the ground of nonstatutory double patenting over claims 11-19 of copending Application No. 10/551339. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter, as follows:

Regarding claim 10 of the present application, '339 requires a refrigeration device, comprising a thermally insulating housing (lines 1 and 2 of claim 11); said thermally insulating housing enclosing an inner chamber (line 3 of claim 11) and an evaporator arranged in said housing separated from said inner chamber (see lines 4-5 of claim 11); a pair of temperature sensors placed in the vicinity of said evaporator such that for a given thickness of said ice layer only one of said temperature sensors is embedded in said ice layer (see lines 1-4 of claim 15, 1-2 of 17 and 1-2 of 18, and 1-2 of 19); a heating device for said evaporator (see line 6 of claim 11); a monitoring circuit connected to said pair of temperature sensors (see line 7 of claim 11); and said monitoring circuit determines the difference between the temperature values detected by said pair of temperature sensors (lines 4-6 of claim 15) and activates said heating device when said temperature difference exceeds a predetermined value (see lines 10-12 of claim 11).

Regarding claim 11, '339 claims the first one of said temperature sensors is arranged directly on said surface of said evaporator (see lines 1-2 of claim 18) and said second one of said temperature sensors is arranged at a distance from said surface (see lines 1-2 of claim 19).

Regarding claim 12, '339 claims a refrigeration device including a channel communicating with said inner chamber (see lines 4-5) and said evaporator arranged in said channel communicating with said inner chamber (see lines 4-5 of claim 1).

Regarding claims 13, '339 claims said second one of said temperature sensors arranged on an output of said channel terminating in said inner chamber (see lines 1-2 of claim 19).

Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending application. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Davis et al (US Patent No. 6,260,365) discloses a refrigeration system with multiple sensors at varying distances relative to the evaporator. Vogel (US Patent No. 5,575,158) discloses a refrigeration defrost cycle. Bahel et al (US Patent No. 5,440,890) discloses a blocked fan detection system for a heat pump. Fudono et al (US Patent No. 5,003,786) discloses a refrigerating apparatus with defrost cycle. Query (US Patent No. 4,860,551) discloses a frost sensor for an appliance. Harshbarger et al (US Patent No. 4,852,360) discloses a heat pump control system with defroster and timer. And Ruminsky et al (US Patent No. 4,417,452) discloses a heat pump system defrost control.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEXIS K. COX whose telephone number is (571)270-5530. The examiner can normally be reached on Monday through Thursday 8:00a.m. to 5:30p.m. EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler or Frantz Jules can be reached on 571-272-4834 or 571-272-6681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/AKC/